

MEGAN BIERAUGLE

STUDENT, ENVIRONMENTAL
SCIENCE



AN ABUNDANCE SURVEY OF MYOTIS LUCIFUGUS (LITTLE BROWN BAT) EMERGENCE FROM OBSERVED DAY ROOSTS NEAR WABAMUN LAKE, ALBERTA, AND ACTIVITY LEVELS DEPENDING ON HABITAT LOCATION

While populations of the *Myotis lucifugus*, or Little Brown Bat are stable and common throughout Wabamun Lake and western Canada, their global populations are rapidly declining. The *M. lucifugus* is a small, nocturnal, and insectivorous species, that relatively little is known about in the study area. As such, this study aims to (1) establish a baseline population count of *Myotis lucifugus* in the area surrounding Wabamun Lake, (2) correlate population per roost with the distance to a water body (in this case Wabamun Lake), (3) to compare the observed population sizes with habitat choice, and (4) to correlate the number of hunting behaviors or “flybys” with the distance across the clearing occupied by the roost. To conduct this research, six colonies were observed over three phases. First, environmental parameters were collected, second, visual counts of flybys were collected, and third, video counts of bat emergence from each roost were collected at each of the colonies. A statistical analysis using CANOCO

5.0 is in the process of being conducted in order to fully explore the research questions, and to note any significance in the results. This analysis will be complete by early April 2019. This research is vitally important in establishing a baseline of bat populations and behaviours in the area surrounding Wabamun Lake, in order to understand their dynamics prior to the westward spread of White-Nose Syndrome.

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